Listing of Claims:

1. (Currently amended) A method for extra-corporeal collection of a blood component from a donor/patient, comprising:

using an extra-corporeal blood processing system having an extra-corporeal blood processing machine, wherein said machine generates a list of component collection options;

using a plurality of donor/patient characteristics to determine blood components capable of being collected from said donor/patient according to different procedures wherein said donor/patient characteristic includes the hematocrit of the donor/patient;

generating a list having a plurality of blood component collection procedures;

using the list in selecting a blood component collection procedure;

establishing a pre-determined packing factor for separated red blood cells within a centrifugal blood processing vessel;

removing blood from a donor/patient;

flowing the blood into a said centrifugal blood processing vessel;

separating the blood into separated blood components within said centrifugal blood processing vessel, said separated blood components including at least separated plasma and separated red blood cells;

collecting at least a portion of at least one of said blood components from said centrifugal blood processing vessel in a blood component collection reservoir separate from said centrifugal blood processing vessel;

returning at least a portion of the uncollected separated blood components from said blood processing vessel to said donor/patient.

2. (Previously presented) A method for extra-corporeal collection of a blood component from a donor/patient according to claim 1 in which said method uses an extra-corporeal blood processing system having an extra-corporeal blood processing machine and a plurality of tubing and bag set options available for use with said machine, said method further comprising loading an appropriate tubing and bag set on said machine after a blood component collection procedure has been selected from said list.

3. (Previously presented) A method as recited in Claim 2, wherein said plasma collection step is performed at least partially after said red blood cell collection step.

4. (Previously presented) A method as recited in Claim 2, wherein said red blood cell collection step is performed at least partially after said plasma collection step.

5. (Canceled)

6. (Currently amended) A method according to claim 5 1 wherein said donor/patient characteristics are input into said machine, and said machine uses said donor/patient characteristics to generate said list.

7. (Currently amended) A method according to claim 5 1 wherein said donor/patient characteristic includes the height and weight of the donor/patient.

8. (Canceled)

9. (Canceled)

10. (Currently amended) A method according to claim 9 1 wherein said packing factor is between 11 and 21.

11. (Currently amended) A method according to Claim 9 1 comprising establishing a packing factor of at least about 13 for the separated red blood cells within said blood proeessing vessel.

12. (Previously presented) A method according to Claim 11 in which the packing factor is about 16.

13. (Currently amended) A method according to Claim 9 1, which further includes establishing an AC ratio in the blood processing vessel of between about 6 and about 16.

14. (Previously presented) A method for extra-corporeal collection of a blood component from a donor/patient, comprising:

using a donor/patient characteristic to determine a blood component capable of being collected, said donor/patient characteristic including the hematocrit of the donor/patient;

generating a list having at least one blood component collection option;

using the list in selecting a blood component to be collected;

removing blood from a donor/patient;

flowing the blood into a centrifugal blood processing vessel;

separating the blood into separated blood components within said centrifugal blood processing vessel, said separated blood components including at least separated plasma and separated red blood cells;

collecting at least a portion of at least one of said blood components from said centrifugal blood processing vessel in a blood component collection reservoir separate from said centrifugal blood processing vessel;

returning at least a portion of the uncollected separated blood components from said blood processing vessel to said donor/patient,

wherein said method uses an extra-corporeal blood processing system having an extra-corporeal blood processing machine, whereby said machine generates said list of at least one component collection option, and

establishing a pre-determined packing factor for the separated red blood cells within said blood processing vessel, in which the packing factor is about 16 during the contemporaneous collection of separated plasma and separated red blood cells and the packing factor is then reduced to about 13 during the at least partial step of collecting separated red blood cells after the performance of the collection of separated plasma.

15. (Currently amended) A method according to claim 5 1 wherein said donor/patient characteristic includes the platelet count of the donor/patient.

16. (Previously presented) A method according to claim 1 wherein said list of blood component options includes at least one option selected from the group consisting essentially of platelets, red blood cells, and plasma.

17. (Previously presented) A method according to claim 1 wherein said list of blood component options includes at least one option selected from the group consisting essentially of single platelets, double platelets, triple platelets, red blood cells, double red blood cells, and plasma.

18. (Previously presented) A method according to claim 1 wherein said list of blood component options includes at least two options as a combination of collectible products selected from the group consisting essentially of single platelets, double platelets, triple platelets, red blood cells, double red blood cells, and plasma.

19. (Previously presented) A method for extra-corporeal collection of a blood component from a donor/patient, comprising:

using a donor/patient characteristic to determine a blood component capable of being collected;

generating a list having at least one blood component collection option;

using the list in selecting a blood component to be collected;

removing blood from a donor/patient;

flowing the blood into a centrifugal blood processing vessel;

separating the blood into separated blood components within said centrifugal blood processing vessel, said separated blood components including at least separated plasma and separated red blood cells;

adding anticoagulant to the blood flowing into the centrifugal blood processing vessel;

collecting at least a portion of at least one of said blood components from said centrifugal blood processing vessel in a blood component collection reservoir separate from said centrifugal blood processing vessel;

delivering a replacement fluid including flowing replacement fluid at a rate equal to the total flow rate of collected blood components minus the flow rate of anticoagulant multiplied by the desired fluid balance percentage in the donor/patient; and

returning at least a portion of the uncollected separated blood components from said blood processing vessel to said donor/patient

20. (Previously presented) A method according to Claim 19 in which a replacement fluid is flowed from a source first to an intermediate reservoir prior to ultimate delivery to the donor/patient.

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Currently amended) A method ~~according to claim 1 including~~ <u>for extra-corporeal collection of a blood component from a donor/patient, comprising:</u>

<u>using a plurality of donor/patient characteristics to determine blood components capable of being collected from said donor/patient according to different procedures;</u>

<u>generating a list having a plurality of blood component collection procedures;</u>

<u>using the list in selecting a blood component collection procedure;</u>

<u>removing blood from a donor/patient;</u>

<u>flowing the blood into a centrifugal blood processing vessel;</u>

<u>separating the blood into separated blood components within said centrifugal blood processing vessel, said separated blood components including at least separated plasma and separated red blood cells;</u>

<u>collecting at least a portion of at least one of said blood components from said centrifugal blood processing vessel in a blood component collection reservoir separate from said centrifugal blood processing vessel;</u>

recirculating a portion of the uncollected separated blood components into said blood processing vessel; and

returning substantially all of the uncollected separated blood components to said donor/patient.

25. (Cancelled)

26. (Currently amended) A blood-processing machine according to claim ~~25~~ <u>24</u> in which said extra-corporeal blood processing machine is adapted to use a plurality of tubing and bag set options.

27. (Cancelled)

28. (Cancelled)

29. (Currently amended) A blood-processing machine according to claim 27 24 wherein said donor/patient characteristic includes the height and weight of the donor/patient.

30. (Currently amended) A blood-processing machine according to claim 27 24 wherein said donor/patient characteristic includes the hematocrit of the donor/patient.

31. (Currently amended) A blood-processing machine according to claim 27 24 wherein said donor/patient characteristic includes the platelet count of the donor/patient.

32. (Currently amended) A blood-processing machine according to claim 25 24 wherein said list of blood component options includes at least one option selected from the group consisting essentially of platelets, red blood cells, and plasma.

33. (Currently amended) A blood-processing machine according to claim 25 24 wherein said list of blood component options includes at least one option selected from the group consisting essentially of single platelets, double platelets, triple platelets, red blood cells, double red blood cells, and plasma.

34. (Currently amended) A blood-processing machine according to claim 25 24 wherein said list of blood component options includes at least two options as a combination of collectible products selected from the group consisting essentially of single platelets, double platelets, triple platelets, red blood cells, double red blood cells, and plasma.

35. (Cancelled)
36. (Cancelled)

37. (Previously presented) A method as recited in claim 1 wherein said step of generating said list of procedures further comprises listing other procedures with indications that certain further products might be qualified for said donor/patient if certain process variable were changed.

38. (Previously presented) A method as recited in claim 37 further comprising changing variable information and regenerating said list of procedures.

39. (Previously presented) A method as recited in claim 38 in which said method uses an extra-corporeal blood processing system having an extra-corporeal blood processing machine and a plurality of tubing and bag set options available for use with said machine, said method further comprising loading an appropriate tubing and bag set on said machine after a blood component collection procedure has been selected from said list.